# Assignment (12.2) 14- Jan 2018

1. Use the given link Data Set.

Answer the below questions:

a. What are the assumptions of ANOVA, test it out?

**Sol : -**

1. Independence of cases – This is an assumption of the model that simplifiers the statistical analysis.
2. Normality – The distributions of the residuals are normal.
3. Equality (“Homogeneity”) of variances is called homosedasticity.

b. Why ANOVA test? Is there any other way to answer the above question?

**Sol:-**

The one way analysis of Variance (ANOVA) also known as one factor ANOVA, is an extension of independent two sample t-test for **comparing mean in a situation where there are more than two groups.**

In One way ANOVA, the data is organised into several groups based on single group variable (also called factor variable.)

**NOTE**  that, if you have only two groups, you can use t- test. In this case T-test and F-test are equivalent.

The function pairwise.t.test() can be also used to calculate pair wise comparisons between group levels with corrections for multiple testing.